Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method of controlling exhaust emission oxides of nitrogen (NOx) from an internal combustion engine (ICE), the method comprising:

commanding an engine shutdown;

determining when an engine speed is below a first predetermined level after the engine shutdown is commanded; and

controlling an oxygen displacement valve (ODV) such that at least a portion of exhaust gas generated by the ICE is directed into an intake air flow of the ICE when it is determined that the engine speed is below the first predetermined level.

2. (canceled)

3. (currently amended) The method set forth in claim 1 wherein ~~the method is performed~~ the engine shutdown is commanded during a deceleration operation of a conventional powertrain vehicle.

4. (currently amended) The method set forth in claim 1 further comprising fully closing an engine throttle to facilitate the engine shutdown.

5. (currently amended) The method set forth in claim 1 further comprising providing a rich air to fuel ratio (AFR) to the ICE for a first predetermined period of time after the engine shutdown is commanded.

6. (currently amended) The method set forth in claim 5 further comprising stopping delivery of fuel to the engine to facilitate the engine shutdown.

7. (currently amended) The method set forth in claim 1 further comprising:

commanding an engine restart; and

controlling the ODV valve such that no exhaust gas is directed into the intake air flow ~~when a decision is made to restart~~ after the engine restart is commanded.

8. (original) The method set forth in claim 7 further comprising spinning up the engine up to a starting speed.

9. (currently amended) The method set forth in claim 8 further comprising providing a rich AFR to the engine for a second predetermined period of time after the engine reaches the starting speed.

10. (original) The method set forth in claim 9 wherein the rich AFR is provided by controlling an evaporative control valve such that at least a portion of fuel evaporative vapors are directed to the intake air flow.

11. (currently amended) The method set forth in claim 7 further comprising opening a throttle after the engine restart is commanded.

12. (currently amended) A system for controlling exhaust emission oxides of nitrogen (NOx) from an internal combustion engine (ICE), the system comprising:

sensors for determining operating conditions of the ICE; and

a controller ~~for determining~~ configured to command an engine shutdown, determine when an engine speed is below a first predetermined level, and ~~controlling~~ control an oxygen displacement valve (ODV) such that at least a portion of exhaust gas generated by the ICE is directed into an intake air flow of the ICE after an engine shutdown is commanded and the engine speed is below the first predetermined level.

13. (canceled)

14. (currently amended) The system set forth in claim 12 wherein the ~~ODV is controlled~~ controller is configured to command an engine shutdown during a deceleration operation of a conventional powertrain vehicle.

15. (currently amended) The system set forth in claim 12 wherein the controller is further configured to fully ~~closes~~ close an engine throttle to facilitate an engine shutdown.

16. (currently amended) The system set forth in claim 12 wherein the controller is further configured to provide ~~provides~~ a rich air to fuel ratio (AFR) to the ICE for a first predetermined period of time after an engine shutdown is commanded.

17. (original) The system set forth in claim 16 wherein the rich AFR is provided by controlling an evaporative control valve such that at least a portion of fuel evaporative vapors are directed to the intake air flow.

18. (currently amended) The system set forth in claim 16 wherein the controller ~~stops~~ is further configured to stop delivery of fuel to the engine to facilitate an engine shutdown.

19. (currently amended) The system set forth in claim 12 wherein the controller ~~operates~~ is further configured to command an engine restart, and to operate the ODV valve such that no exhaust gas is directed into the intake air flow when a decision is made to restart the engine after an engine restart is commanded.

20. (currently amended) The system set forth in claim 19 wherein the controller ~~controls~~ is further configured to control spinning up the engine up to a starting speed.

21. (currently amended) The system set forth in claim 20 wherein the controller ~~provides~~ is further configured to provide a rich AFR to the engine for a second predetermined period of time after the engine reaches the starting speed.

22. (currently amended) The system set forth in claim 19 wherein the controller ~~opens~~ is further configured to open a throttle after an engine restart is commanded.

23. (currently amended) A method of controlling exhaust emission oxides of nitrogen (NOx) from a variable valve internal combustion engine (ICE), the method comprising:

commanding an engine shutdown;

determining when an engine speed is below a first predetermined level after the engine shutdown is commanded; and

controlling the variable valves such that at least a portion of exhaust gas generated by the ICE is directed into an intake air flow of the ICE when it is determined that the engine speed is below the first predetermined level.

24. (currently amended) The method set forth in claim 23 further including the ~~step~~ steps of:

commanding an ICE restart; and

controlling the variable valves such that no exhaust gas is directed into the intake air flow ~~when a decision is made to restart~~ after the ICE is commanded to restart.